

Frequently asked questions regarding the NIST Nanoindentation Round Robin, Copper on Silicon, April 19, 2005

What coating is on the chip labeled RRCuOnSi?

Layers and approximate thicknesses:
5 nanometer titanium adhesion layer;
1.5 micrometer copper;
5 nanometer platinum passivation layer.

Why does the specimen labeled RR CuOnSi look metallic, rather than copper-colored?

The copper is coated with platinum, to retard oxidation of the copper.

What coating is on the chip labeled RRSub?

Silicon dioxide, thickness approximately 115 nanometer.

Is the silicon dioxide supposed to look blue?

Yes.

What should be done with the specimens when the measurements are done?

That's up to you. Please do not return specimens to NIST.

What about microtensile data for the copper?

Material has been set aside for this. If the specimen fabrication goes well, microtensile tests will be done.

How should I mount the chips on aluminum blocks for nanoindentation?

Please use a 'typical' procedure for your organization. If you apply heat to the copper-on-silicon, please include an estimate of temperature and time in your report.